

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions.

**Listing of Claims**

1-20. Cancelled.

21. (previously presented) A peristaltic machine, comprising:  
a flexibly deformable tubing section for receiving viscous material;

a primary roller to cyclically move in a forward direction and a rearward direction about an oval travel path;

a secondary roller to cyclically move in the forward direction and the rearward direction about a linear travel path,

wherein the primary roller compresses the tubing section to the secondary roller during a first portion of the oval travel path and does not compress the tubing section during a second portion of the oval travel path.

22. (previously presented) The peristaltic machine according to claim 21, further comprising:

means connected to a forward portion of the tubing section forward of the primary and second rollers to alternately constrict and unconstrict the forward portion of the tubing section in synchronism with forward movement by the primary and secondary rollers.

23. (previously presented) The peristaltic machine according to claim 22, wherein the constricting means continuously constricts the forward portion of the tubing section to closure until execution of the forward movement by the primary and secondary rollers.

24. (currently amended) The peristaltic machine according to claim 22, wherein the constricting means partially constricts the forward portion of the tubing section during the forward movement by the primary and [[.]] secondary rollers and unconstricts the tubing section after completion of the forward movement to thereby draw back the viscous material in a reverse direction from an output end of the tubing section.

25. (currently amended) A peristaltic machine, comprising:  
a machine body;  
a flexibly deformable tubing section connected to the machine body and adapted to receive viscous material;

compression means connected to the machine body ~~to compress a first portion for cyclical compression and release~~ of the tubing section and ~~propagate for cyclical propagation of the~~ compression forward to thereby propagate the viscous material forward during a forward peristaltic cycle;

partial constriction means for maintaining partial constriction of the tubing section during the forward peristaltic cycle and for releasing the partial constriction in synchronism with an end of the forward peristaltic cycle; and

~~a flow control means unit connected about a portion of the tubing section forward of the compression means~~ for alternately fully constricting and unconstricting the tubing section in synchronism with propagation of the forward peristaltic cycle compression.

26. (previously presented) The peristaltic machine according to claim 25, further comprising:

a movable carriage connected to an output end of the tubing section and controlled to move about a predetermined path with respect to the machine body.

27. (currently amended) The peristaltic machine according to claim 26, wherein said flow control ~~unit~~ means is disposed on said movable carriage.

28. (currently amended) The peristaltic machine according to claim 25, wherein said flow control ~~unit~~ means is disposed on the machine body.

29. (cancelled)

30. (cancelled)

31. (previously presented) A peristaltic machine, comprising:  
a machine body;

a flexibly deformable tubing section connected to the machine body and configured to receive viscous material at a first end;

primary and secondary rollers to compress the tubing section and move forward along the tubing section to propagate the viscous material forward;

a movable carriage supporting a second end of the tubing section and configured to move with respect to the machine body during forward propagation of the viscous material; and

means disposed on the movable carriage for controlling output of the viscous material from the tubing section.

32. (currently amended) The peristaltic machine according to claim 31, said means for controlling output further comprising:

a draw back control unit mounted on said carriage and connected to an output end ~~ends~~ of the tubing section, wherein said draw back control unit partially constricts the tubing section during propagation of the material by said peristaltic unit and unconstricts ~~each of~~ the tubing section after propagation of the material by said peristaltic unit to thereby draw back the viscous material in a reverse direction from the output end ~~ends~~ of the tubing section.

33. (new) The peristaltic machine according to claim 31, wherein the primary roller cyclically follows a primary roller travel path, the primary roller travel path being oblong with curved ends.

34. (new) The peristaltic machine according to claim 33, wherein the primary roller travel path has a pair of cambered elongated sides each respectively connecting to each of the curved ends.

35. (new) The peristaltic machine according to claim 31, wherein the primary roller cyclically follows an obround primary roller travel path.

36. (new) The peristaltic machine according to claim 31, wherein the secondary roller cyclically follows a curvilinear secondary roller travel path.

37. (new) The peristaltic machine according to claim 31, wherein the secondary roller pivots in response to movement of a swing lever.

38. (new) The peristaltic machine according to claim 31, further comprising:

a plurality of additional flexibly deformable tubing sections configured at respective first ends thereof for receiving viscous material, wherein all flexibly deformable tubing sections are connected at the respective first ends to a manifold assembly for receiving the viscous material therefrom,

wherein the primary roller follows a primary roller travel path and the secondary roller follows a secondary roller travel path.

39. (new) The peristaltic machine according to claim 21, wherein the oval travel path of the primary roller is an obround travel path.

40. (new) The peristaltic machine according to claim 21, further comprising:

a plurality of additional flexibly deformable tubing sections for receiving viscous material, wherein all flexibly deformable tubing sections are connected to a manifold assembly for receiving the viscous material therefrom,

wherein the primary roller compresses all tubing sections to the secondary roller during the first portion of the oval travel path and does not compress the tubing sections during a second portion of the oval travel path.

41. (new) The peristaltic machine according to claim 40, wherein the primary roller simultaneously compresses all tubing sections to the secondary roller during the first portion of the oval travel path.

42. (new) The peristaltic machine according to claim 21, wherein the secondary roller pivots during the associated cyclical movement.

43. (new) The peristaltic machine according to claim 21, further comprising:

a body structure; and

a movable carriage connected to an output end of the tubing section and controlled to move about a predetermined path with respect to the body structure.

44. (new) The peristaltic machine according to claim 43, further comprising:

a plurality of additional flexibly deformable tubing sections for receiving viscous material, wherein all flexibly deformable tubing sections are connected to a manifold assembly for receiving the viscous material therefrom,

wherein said compression means cyclically compresses and releases all of the tubing sections to thereby propagate the viscous material forward.